

into the space between the projection 16 and face plate 14, are held in spaced relation from the body 12. While the incisors are not completely out of contact with the body of the airway, they do not comprise the focus of the clamping action of the teeth. Also, by sight, the distastefulness between the two central incisors provides a mechanism to further check the mid-line position of the device. Inadvertent side to side displacement of the bite-block 10 in the patient's mouth is avoided by the flange 38 which seats in the space between the patient's teeth and cheek.

The projection 16 is preferably of sufficient length such that the surfaces 32, 34 engage all of the upper and lower canines, bicuspid, and molars on one side of the patient's mouth. However, from this description, those skilled in the art will appreciate that the bite-block 10 would function with substantially equal effectiveness if the surfaces 32, 34 engaged, for example, only the bicuspid and molars, or even only the molars. Further, while a projection 16 is preferred and shown on only one side of the bite-block 10, this is not absolutely necessary, and a corresponding projection 16 could be formed on the other side of the bite-block 10 as well.

Focusing attention now on the channels 20, 22 and the openings 30, use of an endotracheal tube is commonly accompanied by the accumulation of phlegm, saliva or even blood in the patient's pharynx. Some of this accumulation may be sucked up into the space between the walls of the channel 18 and the endotracheal tube 44. Accordingly, it is desirable to provide means to suction such fluids. As will be apparent immediately hereinafter, such suctioning is readily accommodated by the bite-block 10.

Thus, as best shown in FIG. 3, suctioning of the pharynx may be effected by intubating a suction catheter 46 through the aperture 26 in the face plate 14 and into the channel 20. The channel 20 guides the catheter 46 to the patient's pharynx whereupon fluids accumulated therein may be effectively suctioned. If desired, an additional suction catheter may be guided through the opening 28 in the face plate 14 and into the other side channel 22. To suction fluids accumulating between the walls of the channel 18 and the tube 44, the suction catheter 46 is partially intubated in one of the channels 20, 22 such that its distal end is in the vicinity of the openings 30. When this is done, it will be apparent that suctioning will withdraw fluids accumulated in the channel 18 through the openings 30. It is also contemplated that the channels 20, 22 may be used for intubating other instruments. Additionally, the bite-block 10 may be used for such procedures as flexible bronchoscopy. In such event, the bronchoscope will be inserted in the endotracheal tube 44, and like the tube will be maintained in the midline of the patient's throat. Since the bronchoscope is of lesser diameter than the endotracheal tube 44, the patient can breathe through the unobstructed portion of the tube 44 thus allowing suctioning through the channels 20, 22 as is more fully described above.

Removal of the bite-block 10 is easily accomplished by first removing any instruments in the channels 20, 22 and then pushing the endotracheal tube 44 upward until it is above the ribs 42. The bite-block 10 may then be removed, followed by extubation of the endotracheal tube 44.

It will be apparent from the foregoing description that the bite-block 10 of the present invention is capable of firmly positioning an endotracheal tube while at the same time accommodating suctioning of accumulated fluids. In addition, because the bite-block 10 is held in place in the mouth by the rear teeth, and not the incisors, possible damage to caps on the incisors is avoided.

Moreover, the bite-block 10 is simple, anatomically compatible, relatively inexpensive, and suitable for integral construction as, for example, by injection molding from plastic.

While I have herein shown and described the preferred bite-block in accordance with the present invention and have suggested certain modifications thereto, it will be apparent to those skilled in the art that still further changes and modifications may be made therein without departing from the spirit and scope of the invention. For example, while the face plate 14 illustrated in the drawings is preferred, other face plate designs and constructions are acceptable. Accordingly, the above description should be construed as illustrative and not in a limiting sense, the scope of the invention being defined by the following claims.

We claim:

1. A bite-block for use by a human subject comprising:

a body having a substantially rectangular cross section having an anterior end and a posterior end, said body including a U-shaped central channel having an open top, and a pair of open-sided U-shaped channels on either side of said central channel;

a transverse plate secured to the anterior end of said body, said plate being engageable over the mouth of said subject and having apertures communicating with said channels; and

a projection secured to one side of said body and extending laterally therefrom from a point spaced from said plate to a point near the posterior end thereof, said projection extending laterally sufficiently such that said body is disposed substantially centrally of the mouth and said projection is disposed between upper and lower teeth other than the incisors when the bite-block is disposed in the mouth, said projection including upper and lower surfaces conforming to the curve of Spee, said upper surface being configured for engagement with said upper teeth other than the incisors and said lower surface being configured for engagement with said lower teeth other than the incisors, said upper and lower surfaces being sufficiently spaced apart to preclude clamping of the incisors on said body when said upper and lower teeth other than the incisors engage, respectively, the upper and lower surfaces of the projection.

2. The bite-block according to claim 1, wherein said projection further comprises a flange on the side thereof remote from said body, said flange being dimensioned for seating between the teeth and the cheek.

3. The bite-block according to claim 2, wherein said projection extends from substantially the posterior end of said body to a point in spaced relation from said plate, wherein said teeth other than the incisors are the canines, bicuspid, and molars; and wherein said upper and lower surfaces are complementary to the engaging surfaces of said canines, bicuspid, and molars.

4. The bite-block according to claim 1 or 3, further comprising a pair of confronting ribs in said central channel for frictionally retaining a tube therein.

5. The bite-block according to claim 4, further comprising an opening extending between said central channel and each of said side channels.

6. The bite-block according to claim 1, further comprising an opening extending between said central channel and each of said side channels.

7. The bite-block according to claim 5, wherein said body, said projection, and said plate are integral.

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